

Blair Bilodeau

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DEGREES

Ph.D., Statistical Sciences, University of Toronto June 2023
B.Sc., Financial Modelling, University of Western Ontario June 2018

EMPLOYMENT

The Voleon Group, *Senior Member of Research Staff* Oct 2024 – Present
The Voleon Group, *Member of Research Staff* Jul 2023 – Sep 2024
• Developing systematic investment strategies using modern statistical learning.
Google Brain, *Research Intern* Jul 2022 – Oct 2022
• Led research on statistical theory for interpretable machine learning.
University of Toronto & Vector Institute, *Ph.D. Candidate* Sep 2018 – Apr 2023
• Led research on minimax statistical theory and sequential decision making.
• Winter 2022 at the Simons Institute for the Theory of Computing in Berkeley.
• Winter 2020 at the Institute for Advanced Study in Princeton.
University of Western Ontario, *Undergraduate Researcher* May 2017 – Aug 2018
• Led research on queueing theory with health care applications.
London Life, *Risk Research Intern* May 2016 – Aug 2016
Bell Canada, *Data Analyst Intern* May 2015 – Aug 2015

SELECTED HONOURS AND AWARDS

D. A. S. Fraser Doctoral Thesis Award June 2023
NSERC Postdoctoral Fellowship (*Declined*) Sep 2023 – Sep 2025
University of Chicago Rising Star in Data Science Nov 2022
Institute of Mathematical Statistics Hannan Graduate Student Award Apr 2021
New York Academy of Sciences Machine Learning Symposium Best Poster Award Mar 2020
NSERC Michael Smith Foreign Study Supplement Jan 2020 - Mar 2020
NSERC Alexander Graham Bell Canada Graduate Scholarship (Doctoral & Master's) Sep 2018 – Aug 2022
Queen Elizabeth II Graduate Scholarship in Science and Technology (*Declined*) Sep 2018 – Aug 2019
NSERC Undergraduate Student Research Award (x2) May 2017 – Aug 2018

SELECTED PUBLICATIONS (*Shared first authorship; ^(A) Alphabetical)

^(A)**B. Bilodeau**, A. Stringer, Y. Tang. (2025). Asymptotics of Numerical Integration for Two-Level Mixed Models. **Bernoulli (to appear)**.
B. Bilodeau, N. Jaques, P. W. Koh, B. Kim. (2024). Impossibility Theorems for Feature Attribution. **Proceedings of the National Academy of Sciences**.
***B. Bilodeau**, *J. Negrea, D. M. Roy. (2023). Relaxing the I.I.D. Assumption: Adaptively Minimax Optimal Regret via Root-Entropic Regularization. **Annals of Statistics**.
B. Bilodeau, D. J. Foster, D. M. Roy. (2023). Minimax Rates for Conditional Density Estimation via Empirical Entropy. **Annals of Statistics**.
^(A)**B. Bilodeau**, A. Stringer, Y. Tang. (2022). Stochastic Convergence Rates and Applications of Adaptive Quadrature in Bayesian Inference. **Journal of the American Statistical Association**.
B. Bilodeau, L. Wang, D. M. Roy. (2022). Adaptively Exploiting d -Separators with Causal Bandits. **Neural Information Processing Systems (Oral)**.
B. Bilodeau, D. J. Foster, D. M. Roy. (2020). Tight Bounds on Minimax Regret Under Logarithmic Loss via Self-Concordance. **International Conference on Machine Learning**.

ADDITIONAL ACADEMIC EXPERIENCE

- Invited academic talks at Alberta, Carnegie Mellon, CMStats, CREST, Deepmind, McGill, Michigan, MIT, RIKEN AIP, Simon Fraser, UCLA, Waterloo.
- Course instructor for undergraduate probability theory. TA for various undergraduate statistics courses.
- Referee for top machine learning conferences and statistics journals (awards: NeurIPS, AISTATS, UAI).